Case Presentation

Tamer Ahmed Zaki
Assistant Lecturer of Nephrology
Mansoura Nephrology & Dialysis Unit
Mansoura university Hospitals

Present Hx

- K.M, 24 Year old female from Zagazig presented to ER complaining of persistent fever and dry cough for 2 months

- Patient is Single, has no job, with no special habits

Past Hx

- Condition started 2 months ago with gradual onset and progressive course of high fever reaching 40 degrees of no specific pattern not responding to AB therapy, associated with progressive and persistent dry cough not responding to anti-tussive medications

- One month later patient then developed abdominal pain and vomiting

- Over 2 months time patient sought medical advise and was diagnosed as a case of typhoid fever (with no documentation), for which she received AB (not known by the patient) therapy with no significant improvement

- Further assessment revealed renal impairment and patient was referred to our department for further evaluation

- Patient reported decrease UOP with darkening in its color

Past & Family Hx

- No past history of medical significance
- Mother suffered of HTN and died from intracranial hemorrhage

General Ex

Vital Signs

- BP= 130/80
- HR= 100/min
- RR= 20/min
- temp= 39

Examination

- No Lymphadenopathy detected
- Edema LL reaching knees with buffy eye lids

Systemic Ex

- **Cardiac ex:** NAD
- **Chest ex:** Scattered wheeze and fine crackles mainly basal
- **Abd ex:** NAD
- **Neurological ex:** NAD

- Urine ex:
  - Color smoky
  - Amount about 750ml/24h

Investigations

Complete Blood Picture

- WBC= 19000 (mainly neutrophils)
- Hb= 6.5 (MCV= 85)
- PLT= 414000
- Rc= 1.5
- Coombs test -ve
- Blood film: Neutrophilic leukocytosis

Urine analysis

- Proteinuria +++
- RBC > 200
- WBC 20-30
- Sp Gr= 1015
- 24h urinary protein about 4 gram

Cr= 4.5

LDH= 224

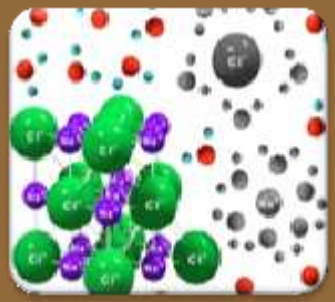
CRP= 192

ALB= 2.1

Bil= 0.7

Liver enzymes= NAD

INR= 1.5



Uric acid= 8.4

Ca= 6.7

PO4= 10

- Patient received 3 units of blood transfusion till Hb reached 10.5
- Serum Cr kept rising 5.7 > 6.1 > 6.5 mg/dl
- Patient had no Clinical indication for dialysis , …….. Days later she developed attack of hemoptysis

Auto-immune Disease

- ANCA associated vasculitis
- Good Pasteur sydrome
- SLE
- Churg-strauss syndrome
- Cryoglobulinemia
- Antiphospholipid syndrome with vasculitis and / or pulmonary embolism

Infection

- Infective Endocarditis
- Others as (cytomegalie-virus, tuberculosis, sepsis)

Diagnosis

Primary renal disease leading to pulmonary disease

- AKI causing pulmonary edema and uremic hemoptysis
- Thromboembolism in nephrotic syndrome: renal vein thrombosis and/ or pulmonary embolism
- Immunosuppression in renal disease causing a pneumonia

Primary pulmonary disease leading to renal disease

- Infection of the respiratory tract with prerenal AKI renal failure and / or postinfectious glomerulonephritis or hematuria in IgA nephropathy

Further Assessment

Serology

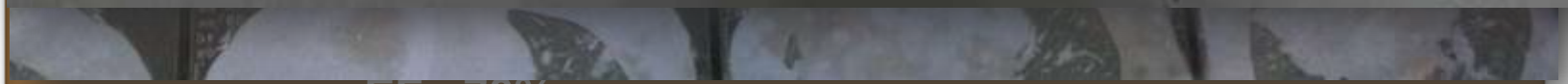
- Virology –ve
- ANA and Anti-DsDNA Ab –ve
- ANCA P,C –ve
- C3= 63 (90-120)
- C4= 7 (10-40)
- ASO titer= 16

- TV: STI

COMMENT

- ***Mild thickened TV leaflets with freely mobile mass (1.3cm x 0.7cm) attached to the atrial su of the anterior TV leaflet (mostly vegetation??) with severe tricuspid regurge (G IV/IV).***
- ***Dilated right side cardiac cahmbers.***
- *Normal left ventricular dimensions with & wall thickness and average overall systolic contr function. & normal diastolic function. normal resting segmental wall motion. No LV thrombi.*
- *Normal aortic cusps morphology with normal transvalvular flow.*
- *Normal mitral valve morphology with trivial mitral regurge.*
- *Normal left atrial dimensions with normal morphology.*
- *Normal pulmonic valve morphology with Laminar flow.*
- *Normal pulmonary artery diameter and pressure.*
- *Normal aortic root diameter with no signs of dissection.*
- *No detected cardiac masses, vegetations or thrombi.*
- *Intact cardiac septae.*
- ***Mild pericardial effusion (0.6cm posterior).***

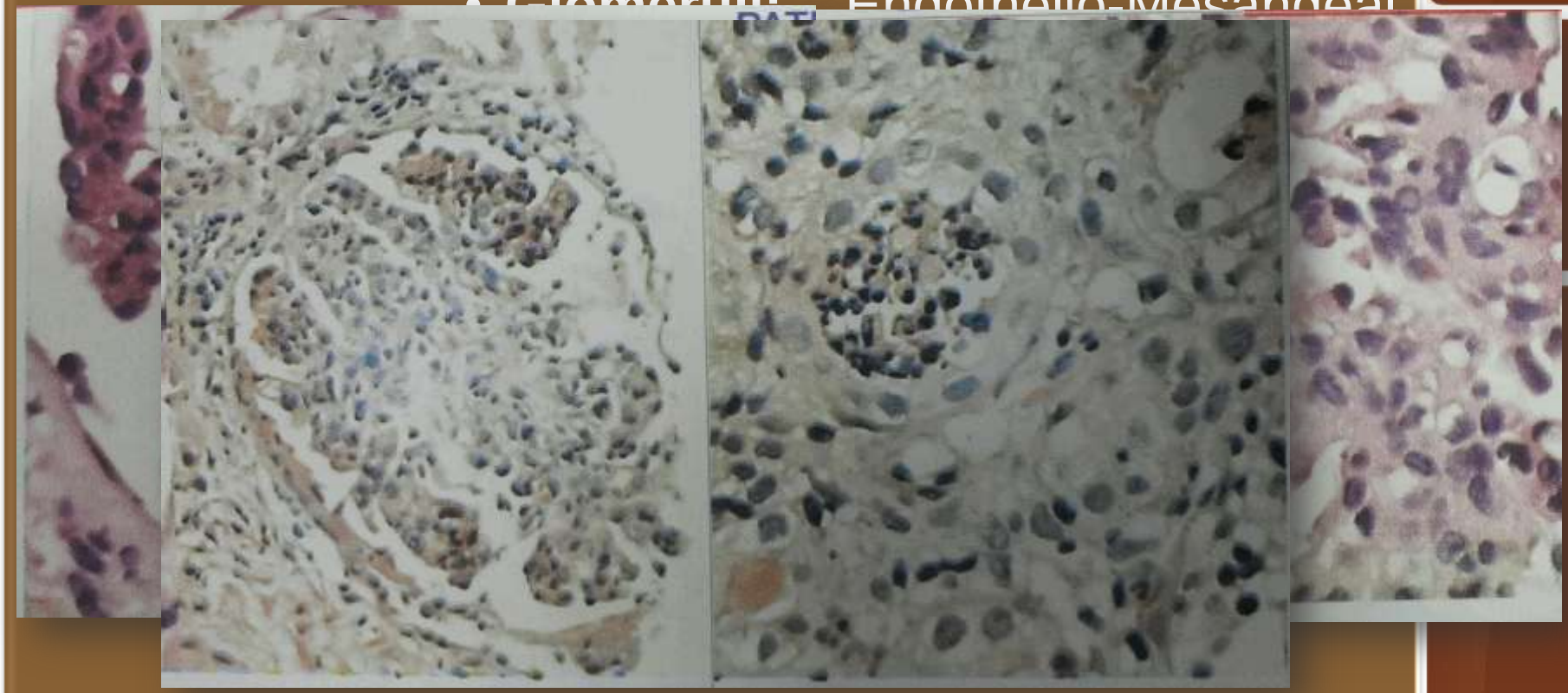
Dr. Adel M. Osma



EF= 70%

Renal Biopsy

- **Biopsy shows 3 glomeruli/section**
- **Glomeruli:- Endothelio-Mesangeal**



- **Picture suggestive of post-infectious GN**

When facing patient with the results, patient admitted to be an **IV drug abuser** (she and all her brothers)

Progress of the patient

- Patient was diagnosed as infective endocarditis, blood culture was drawn and started AB therapy (Penicillin G, Linezolid, Metronidazole, Diflucan IV)
- Patient renal condition was stabilized by AB therapy (drop of Cr level to 4.5 and increase UOP to 1L/d)
- Cr level dropped to 4.7 and repeated urine analysis showed
  - RBC 10-20
  - Pus cells 70-75
  - Proteinuria ++
  - Sp Gr 1010

- Patient then developed recurrent attacks of Frank hemoptysis
- Patient Hb dropped from 10gm/dl to 6.5gm/dl and then patient dyspnea increased with CO2 retention and patient needed ventilation
- Lastly patient developed septic shock, DIC and became anuric
- Patient became unfit for bronchoscopy or surgery (to remove these vegetations)

- Few days later patient developed irreversible shock and …… **arrested**

Thanks